AMENDMENTS TO THE CLAIMS

Claim 1 (withdrawn): An optical disk recording method of recording information at a given recording rate by irradiating a laser beam modulated by a laser drive signal onto a surface of an optical disk moving at a given linear velocity relative to the laser beam, the information being recorded in the form of an alternate arrangement of pits and lands according to a mark length recording scheme, the method comprising the steps of:

providing a plurality of strategies which are selectable according to a model of the optical disk, the recording rate and the linear velocity for adjusting a pulse width of the laser drive signal and a power of the laser beam to form the pit;

providing a first strategy and a second strategy for the same model of the optical disk, the same recording rate and the same linear velocity, the first strategy being designed to shorten the pulse width of the laser drive signal as compared to the second strategy and to set the power of the laser beam to a level capable of obtaining an optimal asymmetry value of a signal reproduced from the optical disk, thereby decreasing jitters of the recorded information as compared to the second strategy, the second strategy being designed to lengthen the pulse width of the laser drive signal as compared to the first strategy and to set the power of the laser beam to a level capable of obtaining an optimal asymmetry value of the reproduced signal, thereby decreasing crosstalk of the recorded information as compared to the first strategy; and

using changeably both of the first strategy and the second strategy dependently on conditions of the recording of information.

Claim 2 (withdrawn): The optical disk recording method according to claim 1, wherein the step of providing provides both versions of the first strategy and the second strategy for an optical disk having a recording capacity measured in terms of a total recording time which is longer than a predetermined recording time, and providing only one version of the strategy equivalent to the first strategy for another optical disk having a recording capacity measured in terms of a total recording time which is not longer than the predetermined recording time.

Claim 3 (withdrawn): The optical disk recording method according to claim 1, wherein the step of providing provides both versions of the first strategy and the second strategy for a recording rate smaller than a specified value, and providing only one version of the strategy equivalent to the first strategy for another recording rate greater than the specified value.

Claim 4 (withdrawn): The optical disk recording method according to claim 1, wherein the step of using changes the first strategy and the second strategy in accordance with a changeover operation of recording modes by a user, the recording modes representing the conditions of the recording of information.

Claim 5 (withdrawn): The optical disk recording method according to claim 4, wherein the recording modes include a normal recording mode directing a reduction of jitters of the information recorded on the optical disk and an alternative recording mode directing a reduction of crosstalk of the information recorded on the optical disk, and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode.

Claim 6 (withdrawn): The optical disk recording method according to claim 4, wherein the recording modes include a normal recording mode directed to recording of information representing computer data and an alternative recording mode directed to recording of information representing audio data, and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode.

Claim 7 (withdrawn): The optical disk recording method according to claim 1, further comprising the step of determining whether contents of information to be recorded are computer data or audio data, so that the step of using automatically uses the first strategy when the contents of the information is determined as the computer data, and uses the second strategy when the contents of the information is determined as the audio data.

Claim 8 (currently amended): An optical disk recording method of recording information at a given recording rate by irradiating a laser beam modulated by a laser drive signal onto a surface of an optical disk moving at a given linear velocity relative to the laser beam, the information being recorded in the form of an alternate arrangement of pits and lands according to a mark length only recording scheme, the method comprising the steps of:

providing a plurality of strategies which are selectable according to a model of the optical disk, the recording rate and the linear velocity for adjusting a pulse width of the laser drive signal and a power of the laser beam to form the pit;

providing a first strategy and a second strategy for the same model of the optical disk, the same recording rate and the same linear velocity, the first strategy being designed to shorten the pulse width of the laser drive signal and increase the power of the laser beam as compared to the second strategy, the second strategy being designed to lengthen the pulse width of the laser drive signal and decrease the power of the laser beam as compared to the first strategy, each strategy being such as to create signals of the same mark length (or pit length) as those that would have been created by the other strategy; and

using changeably both of the first strategy and the second strategy dependently on conditions of the recording of information.

Claim 9 (previously presented): The optical disk recording method according to claim 8, wherein the step of providing a first strategy and a second strategy provides both versions of the first strategy and the second strategy for an optical disk having a recording capacity measured in terms of a total recording time which is longer than a predetermined recording time, and providing only one version of the strategy equivalent to the first strategy for another optical disk having a recording capacity measured in terms of a total recording time which is not longer than the predetermined recording time.

Claim 10 (previously presented): The optical disk recording method according to claim 8, wherein the step of providing a first strategy and a second strategy provides both versions of the first strategy and the second strategy for a recording rate smaller than a specified value, and providing only one version of the strategy equivalent to the first strategy for another recording rate greater than the specified value.

Claim 11 (original): The optical disk recording method according to claim 8, wherein the step of using changes the first strategy and the second strategy in accordance with a changeover operation of recording modes by a user, the recording modes representing the conditions of the recording of information.

Claim 12 (original): The optical disk recording method according to claim 11, wherein the recording modes include a normal recording mode directing a reduction of jitters of the information recorded on the optical disk and an alternative recording mode directing a reduction of crosstalk of the information recorded on the optical disk, and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode.

Claim 13 (original): The optical disk recording method according to claim 11, wherein the recording modes include a normal recording mode directed to recording of information representing computer data and an alternative recording mode directed to recording of information representing audio data, and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode.

Claim 14 (original): The optical disk recording method according to claim 8, further comprising the step of determining whether contents of information to be recorded are computer data or audio data, so that the step of using automatically uses the first strategy when the contents of the information is determined as the computer data, and uses the second strategy when the contents of the information is determined as the audio data.

Claim 15 (withdrawn): An optical disk recording method of recording information at a given recording rate by irradiating a laser beam modulated by a laser drive signal onto a surface of an optical disk moving at a given linear velocity relative to the laser beam, the information being recorded in the form of an alternate arrangement of pits and lands according to a mark length recording scheme, the method comprising the steps of:

providing a plurality of strategies which are selectable according to a model of the optical disk, the recording rate and the linear velocity for adjusting a pulse width of the laser drive signal to form the pit;

specifying a target asymmetry value of a signal reproduced from the optical disk for each strategy;

providing a first strategy and a second strategy for the same model of the optical disk, the same recording rate and the same linear velocity, the first strategy being designed to shorten the pulse width of the laser drive signal as compared to the second strategy, the second strategy being designed to lengthen the pulse width of the laser drive signal as compared to the first strategy;

using changeably both of the first strategy and the second strategy in actual recording of information;

performing test-recording of information on a part of the optical disk before the actual recording while sequentially changing the power of the laser beam under the strategy to be used;

reproducing a signal from the part of the optical disk to find and set an initial power of the laser beam capable of obtaining the target asymmetry value specified for the strategy to be used; and

performing the actual recording with the set initial power.

Claim 16 (withdrawn): The optical disk recording method according to claim 15, wherein the step of providing provides both versions of the first strategy and the second strategy for an optical disk having a recording capacity measured in terms of a total recording time which is longer than a predetermined recording time, and providing only one version of the strategy equivalent to the first strategy for another optical disk having a recording capacity measured in terms of a total recording time which is not longer than the predetermined recording time.

Claim 17 (withdrawn): The optical disk recording method according to claim 15, wherein the step of providing provides both versions of the first strategy and the second strategy for a recording rate smaller than a specified value, and providing only one version of the strategy equivalent to the first strategy for another recording rate greater than the specified value.

Claim 18 (withdrawn): The optical disk recording method according to claim 15, wherein the step of using changes the first strategy and the second strategy in accordance with a changeover operation of recording modes by a user, the recording modes representing the conditions of the recording of information.

Claim 19 (withdrawn): The optical disk recording method according to claim 18, wherein the recording modes include a normal recording mode directing a reduction of jitters of the information recorded on the optical disk and an alternative recording mode directing a reduction of crosstalk of the information recorded on the optical disk, and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode.

Claim 20 (withdrawn): The optical disk recording method according to claim 18, wherein the recording modes include a normal recording mode directed to recording of information representing computer data and an alternative recording mode directed to recording of information representing audio data, and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode.

Claim 21 (withdrawn): The optical disk recording method according to claim 15, further comprising the step of determining whether contents of information to be recorded are computer data or audio data, so that the step of using automatically uses the first strategy when the contents of the information is determined as the computer data, and uses the second strategy when the contents of the information is determined as the audio data.

Claim 22 (withdrawn): An optical disk recording method of recording information at a given recording rate by irradiating a laser beam modulated by a laser drive signal onto a surface of an optical disk of CD recordable type moving at a given linear velocity relative to the laser beam, the information being recorded in the form of an alternate arrangement of pits and lands according to a mark length recording scheme, the method comprising the steps of:

providing a plurality of strategies which are selectable according to a model of the optical disk, the recording rate and the linear velocity for adjusting a pulse width of the laser drive signal and a power of the laser beam to form the pit, the strategies being represented by a formula (n+K)T concerning the pulse width of the laser drive signal where T is a time equivalent to a unit pit length, n is a multiplier of a length of the pit to be formed relative to the unit pit length, and K is a correction amount for the pulse width;

providing a first strategy and a second strategy for the same model of the optical disk, the same recording rate and the same linear velocity, the first strategy being designed to set the correction amount K of the formula (n+K)T to shorten the pulse width of the laser drive signal as compared to the second strategy and to set the power of the laser beam to a level capable of obtaining an optimal asymmetry value of a signal reproduced from the optical disk, thereby decreasing jitters of the recorded information as compared to the second strategy, the second strategy being designed to set the correction amount K of the formula (n+K)T to lengthen the pulse width of the laser drive signal relative to the first strategy and to set the power of the laser beam to a level capable of obtaining an optimal asymmetry value of the reproduced signal, thereby decreasing crosstalk of the recorded information as compared to the first strategy; and

using changeably both of the first strategy and the second strategy dependently on conditions of the recording of information.

Claim 23 (withdrawn): The optical disk recording method according to claim 22, wherein the step of providing provides both versions of the first strategy and the second strategy for an optical disk having a recording capacity measured in terms of a total recording time which is longer than a predetermined recording time, and providing only one version of the strategy equivalent to

the first strategy for another optical disk having a recording capacity measured in terms of a total recording time which is not longer than the predetermined recording time.

Claim 24 (withdrawn): The optical disk recording method according to claim 22, wherein the step of providing provides both versions of the first strategy and the second strategy for a recording rate smaller than a specified value, and providing only one version of the strategy equivalent to the first strategy for another recording rate greater than the specified value.

Claim 25 (withdrawn): The optical disk recording method according to claim 22, wherein the step of using changes the first strategy and the second strategy in accordance with a changeover operation of recording modes by a user, the recording modes representing the conditions of the recording of information.

Claim 26 (withdrawn): The optical disk recording method according to claim 25, wherein the recording modes include a normal recording mode directing a reduction of jitters of the information recorded on the optical disk and an alternative recording mode directing a reduction of crosstalk of the information recorded on the optical disk, and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode.

Claim 27 (withdrawn): The optical disk recording method according to claim 25, wherein the recording modes include a normal recording mode directed to recording of information representing computer data and an alternative recording mode directed to recording of information representing audio data, and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode.

Claim 28 (withdrawn): The optical disk recording method according to claim 22, further comprising the step of determining whether contents of information to be recorded are computer data or audio data, so that the step of using automatically uses the first strategy when the contents of

the information is determined as the computer data, and uses the second strategy when the contents of the information is determined as the audio data.

Claim 29 (withdrawn): An optical disk recording method of recording information at a given recording rate by irradiating a laser beam modulated by a laser drive signal onto a surface of an optical disk of CD recordable type moving at a given linear velocity relative to the laser beam, the information being recorded in the form of an alternate arrangement of pits and lands according to a mark length recording scheme, the method comprising the steps of:

providing a plurality of strategies which are selectable according to a model of the optical disk, the recording rate and the linear velocity for adjusting a pulse width of the laser drive signal and a power of the laser beam to form the pit, the strategies being represented by a formula (n+K)T concerning the pulse width of he laser drive signal where T is a time equivalent to a unit pit length, n is a multiplier of a length of the pit to be formed relative to the unit pit length, and K is a correction amount for the pulse width;

providing a first strategy and a second strategy for the same model of the optical disk, the same recording rate and the same linear velocity, the first strategy being designed to set the correction amount K of the formula (n+K)T to shorten the pulse width of the laser drive signal and increase the power of the laser beam as compared to the second strategy, the second strategy being designed to set the correction amount K of the formula (n+K)T to lengthen the pulse width of the laser drive signal and decrease the power of the laser beam as compared to the first strategy; and

using changeably both of the first strategy and the second strategy dependently on conditions of the recording of information.

Claim 30 (withdrawn): The optical disk recording method according to claim 29, wherein the step of providing provides both versions of the first strategy and the second strategy for an optical disk having a recording capacity measured in terms of a total recording time which is longer than a predetermined recording time, and providing only one version of the strategy equivalent to the first strategy for another optical disk having a recording capacity measured in terms of a total recording time which is not longer than the predetermined recording time.

Claim 31 (withdrawn): The optical disk recording method according to claim 29, wherein the step of providing provides both versions of the first strategy and the second strategy for a recording rate smaller than a specified value, and providing only one version of the strategy equivalent to the first strategy for another recording rate greater than the specified value.

Claim 32 (withdrawn): The optical disk recording method according to claim 29, wherein the step of using changes the first strategy and the second strategy in accordance with a changeover operation of recording modes by a user, the recording modes representing the conditions of the recording of information.

Claim 33 (withdrawn): The optical disk recording method according to claim 32, wherein the recording modes include a normal recording mode directing a reduction of jitters of the information recorded on the optical disk and an alternative recording mode directing a reduction of crosstalk of the information recorded on the optical disk, and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode.

Claim 34 (withdrawn): The optical disk recording method according to claim 32, wherein the recording modes include a normal recording mode directed to recording of information representing computer data and an alternative recording mode directed to recording of information representing audio data, and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode.

Claim 35 (withdrawn): The optical disk recording method according to claim 29, further comprising the step of determining whether contents of information to be recorded are computer data or audio data, so that the step of using automatically uses the first strategy when the contents of the information is determined as the computer data, and uses the second strategy when the contents of the information is determined as the audio data.

Claim 36 (withdrawn): An optical disk recording method of recording information at a given recording rate by irradiating a laser beam modulated by a laser drive signal onto a surface of an optical disk of CD recordable type moving at a given linear velocity relative to the laser beam, the information being recorded in the form of an alternate arrangement of pits and lands according to a mark length recording scheme, the method comprising the steps of:

providing a plurality of strategies which are selectable according to a model of the optical disk, the recording rate and the linear velocity for adjusting a pulse width of the laser drive signal to form the pit, the strategies being represented by a formula (n+K)T where T is a time equivalent to a unit pit length, n is a multiplier of a length of the pit to be formed relative to the unit pit length, and K is a correction amount for the pulse width;

specifying a target asymmetry value of a signal reproduced from the optical disk for each strategy;

providing a first strategy and a second strategy for the same model of the optical disk, the same recording rate and the same linear velocity, the first strategy setting the correction amount K of the formula (n+K)T to shorten the pulse width of the laser drive signal as compared to the second strategy, the second strategy setting the correction amount K of the formula (n+K)T to lengthen the pulse width of the laser drive signal as compared to the first strategy;

using changeably both of the first strategy and the second strategy in actual recording of information;

performing test-recording of information on a part of the optical disk before the actual recording while sequentially changing the power of the laser beam under the strategy to be used;

reproducing a signal from the part of the optical disk to find and set an initial power of the laser beam capable of obtaining the target asymmetry value specified for the strategy to be used; and

performing the actual recording with the set initial power.

Claim 37 (withdrawn): The optical disk recording method according to claim 36, wherein the step of providing provides both versions of the first strategy and the second strategy for an optical disk having a recording capacity measured in terms of a total recording time which is longer

than a predetermined recording time, and providing only one version of the strategy equivalent to the first strategy for another optical disk having a recording capacity measured in terms of a total recording time which is not longer than the predetermined recording time.

Claim 38 (withdrawn): The optical disk recording method according to claim 36, wherein the step of providing provides both versions of the first strategy and the second strategy for a recording rate smaller than a specified value, and providing only one version of the strategy equivalent to the first strategy for another recording rate greater than the specified value.

Claim 39 (withdrawn): The optical disk recording method according to claim 36, wherein the step of using changes the first strategy and the second strategy in accordance with a changeover operation of recording modes by a user, the recording modes representing the conditions of the recording of information.

Claim 40 (withdrawn): The optical disk recording method according to claim 39, wherein the recording modes include a normal recording mode directing a reduction of jitters of the information recorded on the optical disk and an alternative recording mode directing a reduction of crosstalk of the information recorded on the optical disk, and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode.

Claim 41 (withdrawn): The optical disk recording method according to claim 39, wherein the recording modes include a normal recording mode directed to recording of information representing computer data and an alternative recording mode directed to recording of information representing audio data, and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode.

Claim 42 (withdrawn): The optical disk recording method according to claim 36, further comprising the step of determining whether contents of information to be recorded are computer

data or audio data, so that the step of using automatically uses the first strategy when the contents of the information is determined as the computer data, and uses the second strategy when the contents of the information is determined as the audio data.

Claim 43 (withdrawn): An optical disk recording apparatus for recording information at a given recording rate by irradiating a laser beam modulated by a laser drive signal onto a surface of an optical disk moving at a given linear velocity relative to the laser beam, the information being recorded in the form of an alternate arrangement of pits and lands according to a mark length recording scheme, the apparatus comprising:

a strategy storage section that stores a plurality of strategies which are selectable according to a model of the optical disk and the recording rate for adjusting a pulse width of the laser drive signal and a power of the laser beam to form the pit, the strategies being provided in a first strategy version and a second strategy version for the same model of the optical disk and the same recording rate at the same linear velocity, the first strategy version being designed to shorten the pulse width of the laser drive signal as compared to the second strategy version and to set the power of the laser beam to a level capable of obtaining an optimal asymmetry value of a signal reproduced from the optical disk, thereby decreasing jitters of the recorded information as compared to the second strategy version, the second strategy version being designed to lengthen the pulse width of the laser drive signal as compared to the first strategy version and to set the power of the laser beam to a level capable of obtaining an optimal asymmetry value of the reproduced signal, thereby decreasing crosstalk of the recorded information as compared to the first strategy version;

a disk model identification information detector section that detects disk model identification information for identifying the model of the optical disk to be recorded with the information;

a recording rate setting section that sets the recording rate;

a recording mode setting section that specifies one of the first strategy version and the second strategy version to be used for recording of information;

a strategy selector section that selects a corresponding strategy from the strategy storage section according to the disk model identification information detected by the disk model

identification information detector section and the recording rate specified by the recording rate setting section;

a laser drive signal correction section that corrects the pulse width of the laser drive signal;

a laser generator section having an optical head for generating the laser beam in response to the laser drive signal with the power capable of obtaining the optimal asymmetry value of the reproduced signal; and

a control section that controls the laser drive signal correction section in accordance with the specified one of the first or second strategy version of the corresponding strategy selected by the strategy selector section to correct the pulse width of the laser drive signal and that controls the laser generator section to set the power of the laser beam to the level capable of obtaining the optimal asymmetry of the reproduced signal in accordance with the specified one of the first or second strategy version of the corresponding strategy.

Claim 44 (withdrawn): The optical disk recording apparatus according to claim 43, wherein the recording mode setting section specifies one of the first strategy version and the second strategy version in accordance with a changeover operation of recording modes by a user, the recording modes representing conditions of the recording of information.

Claim 45 (withdrawn): The optical disk recording apparatus according to claim 43, further comprising a data type determination section that determines whether a data type of the information to be recorded is computer data or audio data, so that the recording mode setting section automatically specifies the first strategy version for the computer data and the second strategy version for the audio data based on the determined data type.

Claim 46 (withdrawn): An optical disk recording apparatus for recording information at a given recording rate by irradiating a laser beam modulated by a laser drive signal onto a surface of an optical disk moving at a given linear velocity relative to the laser beam, the information being recorded in the form of an alternate arrangement of pits and lands according to a mark length recording scheme, the apparatus comprising:

a strategy storage section that stores a plurality of strategies which are selectable according to a model of the optical disk and the recording rate for adjusting a pulse width of the laser drive signal and a power of the laser beam to form the pit, the strategies being provided in a first strategy version and a second strategy version for the same model of the optical disk and the same recording rate at the same linear velocity, the first strategy version being designed to shorten the pulse width of the laser drive signal as compared to the second strategy version, the second strategy version being designed to lengthen the pulse width of the laser drive signal as compared to the first strategy version;

a disk model identification information detector section that detects disk model identification information for identifying the model of the optical disk to be recorded with the information;

a recording rate setting section that sets the recording rate;

a recording mode setting section that specifies one of the first strategy version and the second strategy version to be used for recording of the information;

a strategy selector section that selects a strategy from the strategy storage section according to the disk model identification information detected by the disk model identification information detector section and the recording rate specified by the recording rate setting section;

a laser drive signal correction section that corrects the pulse width of the laser drive signal;

a laser generator section having an optical head for generating the laser beam having a power modulated in response to the laser drive signal;

an asymmetry value detector section that detects an asymmetry value of a signal reproduced from the optical disk;

a control section that performs test-recording of information on a part of the optical disk before actual recording while sequentially changing the power of the laser beam under the selected strategy and determines an initial power of the laser beam capable of obtaining a target asymmetry value specified for the selected strategy according to the detected asymmetry value of the signal reproduced from the part of the optical disk, and further the control section controls the laser drive signal correction section in accordance with the specified one of the first or second strategy version of the selected strategy to correct the pulse width of the laser drive signal and controls the laser

generator section to set the initial power of the laser beam capable of obtaining the optimal asymmetry of the reproduced signal in the actual recording of the information.

Claim 47 (withdrawn): The optical disk recording apparatus according to claim 46, wherein the recording mode setting section specifies one of the first strategy version and the second strategy version in accordance with a changeover operation of recording modes by a user, the recording modes representing conditions of the recording of information.

Claim 48 (withdrawn): The optical disk recording apparatus according to claim 46, further comprising a data type determination section that determines whether a data type of the information to be recorded is computer data or audio data, so that the recording mode setting section automatically specifies the first strategy version for the computer data and the second strategy version for the audio data based on the determined data type.